

IN CLAIMS:

Claims 1 - 6 (canceled)

Claim 7 (new): An Internet access system reducing Internet traffic and delays in content delivery comprising:

two-way addressable communication means for transmitting data between devices connected to the means by directing data to addresses assigned to the devices;

a broadcast multichannel medium for transmitting data in a broadcast manner;

a multichannel data transmitter provided at a transmission center and coupled to the broadcast multichannel medium;

a broadcast server located at the transmission center and coupled to said two-way addressable communication means for receiving requests for Internet objects from Internet clients and connected to the Internet via a network interface for downloading the requested objects from web servers located anywhere in the world and further coupled to said multichannel data transmitter for transmitting the downloaded Internet objects in a broadcast manner in order that Internet clients requested the same object could download the object simultaneously;

said broadcast server operative for maintaining a server selection list of Internet objects requested by Internet clients and providing for each object of the selection list a number of clients requested the object;

downloading only one copy of each object of the server selection list from its origin web server no matter how many clients have requested that object, thereby reducing

Internet traffic;

selecting channels of said multichannel data transmitter for broadcast transmission of downloaded objects and maintaining a broadcast schedule specifying a transmission channel for each object to be transmitted;

transmitting the broadcast schedule on a channel known to Internet clients;

transmitting each Internet object on the channel specified for that object in the broadcast schedule;

retaining Internet objects requested by more than one client and repeatedly transmitting the objects with time intervals small enough so not to be considered as delays in content delivery;

continuing the transmission during a period of time determined for each object proportionally to the number of clients requested the object in order that other clients whose users will request the object during that period of time could download the object without sending a request to the broadcast server, thereby further reducing Internet traffic and reducing delays in content delivery;

at recipient side, a multichannel data receiver coupled to said broadcast multichannel medium for receiving data transmitted by said multichannel data transmitter;

an Internet client coupled to the multichannel data receiver so to be able to switch channels of the receiver and obtain data transmitted on different channels, and further coupled to said two-way addressable communication means for sending requests to said broadcast server;

said Internet client being operative for obtaining a user request for an Internet object;

receiving said broadcast schedule over a channel of said multichannel data receiver;

identifying a channel specified in the broadcast schedule for transmission of Internet object requested by user if the object is included in the broadcast schedule;
sending a request to the broadcast server only if the object requested by user is not included in the broadcast schedule, thereby reducing interaction with the broadcast server, and waiting until the object will be included in the broadcast schedule;
switching said multichannel data receiver to the channel specified in the broadcast schedule for transmission of Internet object requested by user;
downloading the object from that channel; and
presenting the object to user.

Claim 8 (new): An Internet access system reducing Internet traffic and delays in content presentation comprising:

two-way addressable communication means for transmitting data between devices connected to the means by directing data to addresses assigned to the devices;
a broadcast multichannel medium for transmitting data in a broadcast manner;
a multichannel data transmitter provided at a transmission center and coupled to the broadcast multichannel medium;
a broadcast server located at the transmission center and coupled to said two-way addressable communication means for receiving requests for Internet objects from Internet clients and connected to the Internet via a network interface for downloading the requested objects from Internet servers located anywhere in the world and further coupled to said multichannel data transmitter for transmitting the downloaded objects in a broadcast manner so that Internet clients requested the same object could

download the object simultaneously;

said broadcast server operative for maintaining a server selection list of Internet objects requested by Internet clients and providing for each object of the selection list a number of clients requested that object;

scheduling objects of the server selection list for broadcast transmission so to transmit objects requested by more than one client repeatedly during a period of time determined for each object proportionally to the number of clients requested the object in order that other clients whose users will request the object during that period of time could download the object without sending a request to the broadcast server;

maintaining a broadcast schedule specifying a transmission time and a transmission channel for each object to be transmitted;

transmitting the broadcast schedule via a channel known to Internet clients;

downloading each Internet object included in the broadcast schedule from its origin web server before the time of scheduled broadcast transmission of that object;

limiting the download to only one copy of the object no matter how many clients have requested that object, thereby reducing Internet traffic;

transmitting only one copy of each Internet object at the time and on the channel specified for that object in the broadcast schedule;

at recipient side, a multichannel data receiver coupled to said broadcast multichannel medium for receiving data transmitted by said multichannel data transmitter;

an Internet client coupled to the multichannel data receiver so to be able to switch channels of the receiver and obtain data transmitted on different channels, and further coupled to said two-way addressable communication means for sending requests to

said broadcast server;

said Internet client being operative for obtaining and storing a user's selection list of Internet objects;

receiving said broadcast schedule over a channel of said multichannel data receiver;

for each Internet object of the user's selection list, which is included in the broadcast schedule, identifying a time and a channel specified in the broadcast schedule for transmission of that object;

sending a request to the broadcast server only for those objects of the user's selection list, which are not included in the broadcast schedule, thereby reducing interaction with the broadcast server;

at a time specified in the broadcast schedule for transmission of an Internet object of the user's selection list, switching said multichannel data receiver to the channel specified in the broadcast schedule for transmission of that object;

downloading the object from that channel and, if necessary, replacing an old version of the object by a new one;

storing the object; and

instantly presenting the stored object to user at a time selected by user, thereby reducing delays in content presentation.